

Summary of Findings by Region

East Texas Pineywoods. Despite the large number of parks and wildlife management areas in East Texas, most types of plant community native to East Texas are poorly protected. More than 40,000 acres of upland forest (vegetation types #3 and #4) are protected in parks and wildlife areas in East Texas, but most sites have been modified by logging in the last four decades. Timber harvesting is ongoing at some state parks as well as most national forest lands and private lands. Consequently, the species richness of native mixed forests is often not evident, even at "protected" sites. A number of species-rich communities, including xeric sandhills (#1), longleaf pine woodlands (#2), barrens (#5), glades (#6), wet pine savannas (#8), seeps and seep forests (#9), flatwoods ponds (#11), and baygalls (#12) occur only as small, isolated sites that are vulnerable to logging or hydrologic alteration on adjacent lands (Bridges and Orzell 1989b). Preserved examples of these communities are, in every case, possibly inadequate to ensure their viability in Texas. Several of these community types are still extensive on U.S. Forest Service public lands but are not protected by the Service from logging or other potentially harmful activities (Orzell 1990). Despite being relatively well represented in wildlife areas and preserves, bottomland forest (vegetation types #14 through #17) have decreased in area by an estimated 63 percent in eastern Texas since 1950, and commercial clear-cutting of bottomlands has increased dramatically in the last two decades (Frye 1987). Mature examples of bottomland forest still exist in most of the river basins of East Texas, especially the Neches River, but the majority of examples are threatened by water development projects proposed by regional water plans (Buescher, Willis and Ratliff 2000; Schaumburg and Polk Inc. 2000).

Post Oak Savannas. The upland vegetation of the Post Oak Savannas is protected at a number of wildlife management areas and other sites; however, sites that support rare or endemic plants are not well represented (e.g. Eocene

sandhill sites occurring in upland forests of type #21). Unusual habitats such as bogs (#24) and pine forest (#22) are protected at multiple sites, but some protected areas fail to protect the viability of unusual habitats (e.g. the Palmetto State Park, which ostensibly preserves the Ottine Swamp of Gonzales County but contains little bog habitat).

Blackland Prairies. As mentioned above, the natural vegetation of the Blackland Prairies is almost extirpated. The largest protected area of contiguous natural grassland in the region, the Clymer Meadow Preserve, is only 800 acres in size. Regrettably, restoration of large areas of grassland may be impractical, but unprotected remnants of significant size exist in private ownership, as well as small tracts. Assisting landowners in managing and protecting these beautiful and underappreciated relicts should be a high priority.

Gulf Coastal Prairies and Marshes. The Gulf coast is a part of the state where conservation of nature has been given deserved attention. Most ecological communities are well represented in conservation areas, with the arguable exception of upland grasslands and swales (vegetation types #33 and 38). However, there are still specific locales important to wildlife that are not fully protected. Examples include the relatively undisturbed freshwater marshes and bottomland forest of the Trinity River delta and the wind-tidal flats and seagrass beds in the Laguna Madre.

South Texas Plains. The vegetation of South Texas is perhaps most complex and diverse around the Lower Rio Grande Valley, where conservation efforts have been focused for two decades. The acquisition of habitat in the Valley for wildlife by the TPWD and USFWS has provided opportunities to preserve and study the vegetation of that nationally unique area. However, more than 90 percent of the lower Valley has been converted to agricultural use, and the success of revegetation efforts conducted by the U.S. Fish and Wildlife Service has been mixed (USFWS 1979; Best pers. comm.). Efforts should continue to acquire and preserve the last remnant tracts of habitat in the Valley (e.g. vegetation types 53b, 55, 58, 59, 63a, 63b and 64b).

Edwards Plateau. Though significant park and wildlife management areas have been purchased in recent decades in the Edwards Plateau, much of that acreage is not in natural condition (TPWD 1996). Much protected acreage is in Travis County, which lacks a number of rare plants and communities found further west. Extensive undeveloped areas of native vegetation remain in the Edwards Plateau, but rural residential development and ever-increasing land prices threaten the character of much of the region. Canyons, where much of the region's floral diversity occurs, are limited in extent and vulnerable to increased fragmentation. Protection of the maple-oak canyon forest type (#72) seems particularly urgent.

Prairies and Cross Timbers. Woodland vegetation types in this region are similar to those occurring in the Edwards Plateau and Post Oak Savannas, so the representation of the region in parks and preserves is perhaps not as poor as Table 9 suggests. But like all regions of Texas where grasslands once occurred, there are few remnants of natural ecosystems left, and urbanization is changing landscapes here as elsewhere.

Rolling Plains. The Rolling Plains region contains relatively low diversity both of species and communities (Carr 1999c). However, most communities recognized in the region, including grasslands (vegetation type #82) and riparian woodlands (#88), have been overutilized and, though not rare, are little protected. As in other parts of western Texas, overutilization of groundwater has starved springs and streams.

High Plains. The High Plains contains the smallest amount of park and preserve acreage of any region of Texas (about 15,000 acres, less than .1 percent of the region), though sizeable acreage is enrolled in range conservation programs and game hunting is an important component of the region's economic base. Areas of native rangeland remain, sustaining wildlife. However, playas and other wetlands are little protected and are rapidly being modified.

West Texas. There are more conservation areas in West Texas than elsewhere in Texas. Several parks and wildlife areas in West Texas encompass complete mountain ranges and thus contain a cross-section of vegetation types.

Plant diversity is highest in the Guadalupe, Davis and Chisos ranges, and all or part of the three ranges is in conservation management. However, the status of some endemic and rare plants is of concern. Rangelands were overgrazed throughout the Trans-Pecos with dramatic degradation of grasslands resulting. Relatively undisturbed examples of most grassland types (e.g. vegetation types #105, #109, and #113) are few in number and should take precedence in conservation efforts. Vegetation associated with natural water sources has been overgrazed, cleared, and otherwise modified. Riparian woodlands (vegetation types #102, #108, and #114) and cienegas (#110) should be high priorities for preservation by private owners and the public.